

ABSTRACT OF THE DISCLOSURE

A process for making a relatively low molecular weight, mid-range vinylidene content PIB polymer product comprising a liquid phase polymerization process conducted in a loop reactor at a temperature of at least 60 °F. using a BF_3 /methanol catalyst complex and a contact time of no more than 4 minutes. At least about 90% of the PIB molecules present in the product comprise alpha or beta position isomers. The vinylidene (alpha) isomer content of the product may range from 20% to 70% thereof, and the content of tetra-substituted internal double bonds is very low, advantageously no more than about 10%, preferably less than about 5% and ideally less than about 1-2%.